MARKETING RESEARCH STUDY

FOR

CITY OF MEMPHIS ENVIRONMENTAL ENGINEERING

- Survey of Memphis Consumers' Opinions About Storm Water Pollution -

Prepared for:

City of Memphis Environmental Engineering

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Table of Contents

Page

Background and Objectives

In 1999, the City of Memphis (City) developed and began a public relations campaign designed to educate the public about the causes and prevention of storm water pollution. Prior to beginning the campaign, the City Environmental Engineering Department commissioned Research Dynamics, Inc. to measure Memphis residents' awareness and opinions about storm water pollution and other environmental issues through a marketing research study. Since the storm water education program has been in place, the City Environmental Engineering Department has commissioned two follow-up surveys (2000 and this 2002 survey) to measure changes in public knowledge about storm water pollution.

Specific questions to be answered by this study include:

- How concerned are respondents with various environmental issues facing Memphis?
- How many respondents are aware of the correct definitions of storm water and storm water pollution when read to them? What items did respondents say cause storm water pollution?
- How many respondents are aware of there being a problem with storm water pollution in Memphis?
- Do respondents feel businesses or individuals are responsible for causing storm water pollution? Whose responsibility do respondents feel it is to prevent storm water pollution?

- What term do respondents feel best describes the opening where storm water flows?
- Do respondents believe that storm water goes through a cleaning process before reaching the Mississippi River?
- How many respondents would stop doing something that they learned could cause pollution of the river?
- How interested are respondents in learning more about storm water pollution?
- How many respondents have seen, read, or heard anything about storm water in the past year? Where did they see or hear it?

- How do respondents dispose of items such as automobile oil, fertilizers/ pesticides/herbicides, leaves/grass clippings, household cleaning products, and old paint?
- Do respondents clean up after their pets?
- How many respondents would be willing to pay $4 per month for a new program that would pay for projects to reduce flooding and pollution in rivers and lakes?

- How have the results to survey questions changed since the 1999 and 2000 surveys?

Methodology

•A total of 250 random telephone interviews were conducted with adults 18 years old or older who live in Memphis.

•Interviews were conducted between January 14 and January 23, 2002.

•The margin of error for results based on the total sample of 250 respondents is +/- 6 points. This means that if all adults in Memphis were interviewed, in 95 out of 100 cases the results would differ by no more than 6 points in either direction from the results of the 250 respondents interviewed for this study.

•Note: The 1999 survey sample was composed with a sample size of 400, as compared to the 250 sample size in the 2000 and 2002 surveys. The smaller sample size should be kept in mind when reviewing survey results that compare the 1999, 2000, and 2002 surveys, but the margin of error was only one point lower (i.e., +/-5 points) in the 1999 survey.

•A copy of the questionnaire is appended.

Summary of Findings

1.**Importance Of Environmental Issues**

- Of four issues tested for their importance in the opinion of survey participants, **Running out of space for disposing trash**, by a 13-point margin, recorded the highest Major Concern score in this 2002 survey (69%). **Not enough people recycling** was considered a Major Concern by 56% of those surveyed, **Storm water pollution** by 52%, and **Poor air quality** by 48%.
- Since the 2000 survey, the Major Concern score for **Running out of space for disposing trash** decreased seven points, to 69%, which, as mentioned above, is still the highest score of the four issues. **Storm water pollution's** Major Concern percentage increased seven points since 2000 (to 52%).

2.**Awareness Of Definitions Of Storm Water And Storm Water Pollution**

- Whether it be the definition of **Storm water** or **Storm water pollution**, about six in ten 2002 survey participants were aware of these definitions when the definitions were read to them (60% and 59%, respectively).
- While awareness of the definition of **Storm water pollution** basically stayed at its 2000 level (moving from 57% in 2000 to 59% this year), there was a six-point decrease in awareness of the definition of **Storm water** (to 60%, from 66% in 2000).

3.**Causes Of Storm Water Pollution**

- As in the first two surveys, **Garbage/Trash/Debris** (47%), **Oil/Motor oil** (24%), and **Chemicals** (13%) again ranked among the leading items respondents said get into storm water to cause storm water pollution. However, **Leaves** were cited much more often than in previous surveys as a cause of storm water pollution (24%).

4.**Awareness Of Storm Water Pollution Problem In Memphis**

- Twenty-six percent (26%) of respondents in this year's survey were of the opinion that there **Is a problem with storm water pollution in Memphis**. However, most of those surveyed, 76%, are **Not aware of a problem with storm water pollution**.
- For the second consecutive survey, there has been a slight increase in the percentage of respondents who believe Memphis **Does have a problem with storm water pollution** (three-point increase, to 26%, this year).

5.**Responsibility For Causing/Preventing Storm Water Pollution**

- As far as causing storm water pollution, other than the 74% of respondents this year who said **Businesses and Individuals are Equally responsible**, a few more people thought **Individuals** responsible, rather than **Businesses** (13% vs. 10%). When it comes to the responsibility for preventing storm water pollution, the overwhelming majority of respondents in this 2002 survey thought such prevention the responsibility of **They themselves, Other people, and Businesses Equally** (92%).
- While there has been little change since the last survey in terms of who respondents feel is responsible for preventing storm water pollution, this year's survey did see a gain in **Individuals** being named as a cause of storm water (to 13%, up from 5% in 2000), and a drop in **Businesses** being named (10%, down from 19% in 2000).

6.**Term For Opening Where Storm Water Flows**

- No clear consensus emerged in this 2002 survey when respondents were asked which of four terms best describes the opening where storm water flows. One-third of those surveyed said **Storm drain** is the best term to describe this opening (33%), followed by **Sewer** (24%), and **Gutter** (15%). Importantly, 28% of respondents said they **Don't know** which term best describes the opening where storm water flows.

6.**Term For Opening Where Storm Water Flows** (continued)

•Of the four response choices presented to respondents when they were asked which term best describes the opening where storm water flows, two saw a six-point decrease in mentions since 2000: **Storm drain** (from 39% to 33%) and **Gutter** (21% to 15%). Those who **Don't know** which terms best describes the opening increased, to 28%, from 19% in 2000.

7.**Storm Water Going Through A Cleaning Process**

•Those respondents who have a specific opinion clearly believe storm water does **Not go through a cleaning process before reaching the Mississippi River** (56%, vs. 8% who said storm water **Does go through a cleaning process**). However, a sizeable segment of survey participants **Don't know if storm water goes through a cleaning process before reaching the Mississippi River** (36%).

•The number of respondents who **Don't know if storm water goes through a cleaning process before reaching the Mississippi River** jumped to 36% this year, from 20% in 2000, and back near the 35% Don't know level in the original 1999 survey.

8.**Stopping Actions That Could Cause Pollution Of The River**

•In all three surveys 97% of respondents **Would stop doing something they learned could cause pollution of the river**.

9.**Interest In Learning More About Storm Water Pollution**

•As far as how interested they are in learning more about storm water pollution, 82% of those surveyed this year said they are **Very Interested** (22%) or **Somewhat Interested** (60%).

•In 1999, 2000, and now in 2002, between 82% and 86% of the survey sample has been **Very/Somewhat Interested** in learning more about storm water pollution.

10.**Awareness Of Information About Storm Water Pollution** (Only Asked In 2002 Survey)

•One-fourth of those interviewed in this 2002 survey reported having **Seen/Read/Heard something about storm water pollution in the past year** (24%).

•Among those aware of information about storm water pollution, **Television** is where information about storm water pollution has most often been Seen/Heard (78%), followed by **Newspaper** (53%), **Radio** (15%), and **Brochure** (3%).

11.**How Automobile Oil Is Disposed**

•Eighteen percent (18%) of respondents in this year's survey **Change their own oil**. .....

As far as how they dispose of used Oil, in results that are not much different from the 1999 and 2000 surveys, two-thirds of those who change their own oil **Take used Oil to a Recycling center** (66%), as compared to 18% who **Put it in the trash**, and 9% who **Store it**. The largest segment of oil changers reported buying oil or other automotive fluids **3 to 5 times in the past year** (43%).

12.**How Fertilizers/Pesticides/Herbicides Are Disposed**

•Most participants in this 2002 survey said they **Have either a yard or garden** (85%).

•Of those respondents who have a yard or garden, 33% have Fertilizers/ Pesticides/Herbicides applied by an **Outside service**, 26% apply these products **Themselves**, and 41% said these products are **Not applied** on their yard or garden. This is a slight change from 2000 when slightly more respondents reported applying Fertilizers/Pesticides/Herbicides **Themselves**, rather than using an **Outside service** (35% vs. 28%).

•Ninety percent (90%) of the respondents who apply Fertilizers/Pesticides/ Herbicides Themselves **Store it and use it later**. Most respondents who use an Outside service think the Service **Stores Fertilizers/Pesticides/Herbicides and uses them later** (44%) or **Don't know what the Service does with the leftover product** (46%).

13.**How Leaves/Grass Clippings Are Disposed**

•In this 2002 survey, 79% of those interviewed who have a yard or garden **Bag their Leaves and Grass clippings for the city to pick up**. This was far more than the 10% who **Compost Leaves and Grass clippings** and the 7% who **Leave their Leaves and Grass clippings in their yard**.

•Since 1999, the percentage of respondents who **Bag Leaves and Grass clippings for the city to pick up** has increased from 67%, to 70% in 2000, to 79% this year.

14.**How Household Cleaning Products Are Disposed**

•Leftover Household cleaning products are most often **Stored and used later** (74%), with 14% of respondents **Putting Household cleaning products in the trash**.

•This year, there was an increase in **Storing Household cleaning products and using them later** (to 74%, from 59% in 2000), while **Putting leftover Household cleaning products in the trash** saw a decrease, from 26% in 2000 to 14% this year.

15.**How Old Paint Is Disposed**

•Just under half of the respondents in this year's survey **Store their old Paint and use it later** (47%); however, compared to how other items are disposed, this "Store and use later" score was not appreciably higher than the 16% of those who **Put old Paint in the trash**. One in four respondents **Don't have any paint** (25%).

•The methods of disposing of old Paint in this 2002 survey really didn't change much since 2000, although the number of people who said they **Put old Paint in the trash** did decrease seven points this year, from 23% to 16%.

16.**Cleaning Up After Pets**

•Six in ten respondents, 62%, **Don't have a pet**, with an additional 14% having a pet that they don't walk (such as a cat) or a pet that doesn't leave their yard. Among those who do walk their pet, far more **Do clean up after their pet** than do **Not clean up after their pet** (19% of the total sample, vs. 5% of the total sample).

16.**Cleaning Up After Pets** (continued)

•In all three surveys more respondents said they Do clean up after their pet than do Not clean up; however, this 2002 survey marked the greatest difference between respondents who **Do clean up after their pet** and those who do **Not clean up after their pet** (19% vs. 5%).

17. **Willingness To Pay Monthly Fee For New Program** (Only Asked In 2002 Survey)

•When presented with the potential option of paying $4 per month for a new program that would pay for projects to reduce neighborhood flooding and reduce pollution and trash in our rivers and lakes, 40% **Would pay the $4 per month**, 46% would **Not pay**. Perhaps importantly though, 14% of the survey sample said they would need more information about the program, such as how the money would be used and how results would be demonstrated.

Conclusions

1)Overall Survey Results. In this third storm water pollution survey, we continue to see that the level of concern, interest, and knowledge about this topic is perhaps higher than might have been generally assumed. And, even with educational efforts that have been undertaken over the past couple of years, interest remains quite high in learning even more about storm water pollution. This section of conclusions will look at those survey results that demonstrate Memphis citizens' concern, interest, and knowledge about storm water pollution, as well as point out a few areas that might be the focus of future communication efforts.

2)Concern About Storm Water Pollution. In the very first survey question, before any information about storm water pollution had been presented to them, respondents were asked how concerned they are about four environmental issues facing Memphis. Three of these issues -- Running out of space for disposing trash, Not enough people recycling, and Poor air quality -- involve words and topics that are quite familiar to most people. By contrast, Storm water pollution, the fourth issue, relates to a word and topic that is somewhat less commonly-known. If these assumptions are accepted as true, it certainly speaks well for the level of concern respondents have for the issue of Storm water pollution that, as in both the 1999 and 2000 surveys, Storm water pollution was again seen as an equal concern to two of the three others issues -- Not enough people recycling and Poor air quality. (The fourth issue, Running out of space for disposing trash, will be discussed later.) In fact, the Major Concern score for Storm water pollution increased seven points in this 2002 survey, back to its 1999 level of 52%.

Not only was there a relatively high level of concern attached by respondents to the issue of Storm water pollution, but knowledge about the issue is fairly high as well, as will be discussed in the next section of these conclusions.

3)Knowledge About Storm Water Pollution. A couple of survey questions measured respondent knowledge about storm water pollution.

First, survey participants were asked if they were aware of definitions of storm water and storm water pollution read to them by the interviewers. In both surveys in which these two questions have been asked, 60%-65% of those surveyed said they were aware of the definitions of both topics. While it's true that there does exist room for these percentages to improve, this 60%-65% level of awareness is pretty impressive when you consider the fact that other issues such as Poor air quality and Not enough people recycling surely have much higher levels of awareness, yet, as discussed on the previous page, are not seen as any more of a concern than Storm water pollution. Therefore, it could certainly be concluded that despite not having as high a level of definition awareness, Storm water pollution is receiving quite a bit of recognition as an issue of concern.

Secondly, survey respondents once again this year demonstrated good knowledge (off the top of their head, without assistance from interviewers) of the kinds of items that get into storm water to cause storm water pollution. Garbage/Trash, Leaves, Oil, Paper/Bags/Cups, Cans, Chemicals, and Bottles were all identified by more than 10% of all respondents as causes of storm water pollution; certainly many of these items mentioned by respondents are in fact leading sources of storm water pollution once they get into storm water.

We've now considered survey results that suggest both concern about and knowledge of storm water pollution. Our next area of focus will be future interest in learning more about storm water pollution.

4)Interest In Learning More About Storm Water Pollution. One of the key questions asked in all three surveys has sought to measure respondents' interest in learning more about storm water pollution.

This 2002 survey marked the third consecutive survey in which more than 80% of those surveyed have said they are Very Interested or Somewhat Interested in learning more about the issue. Over the three surveys, this Very Interested/Somewhat Interested score has remained remarkably consistent (between 82% and 86%), which not only confirms the level of respondent interest in learning more about storm water pollution, but also shows that the level of interest remains high, even though many people have gained knowledge through the City's education efforts that have been undertaken in the past couple of years.

Also worth noting is the fact that more than 80% of respondents are remaining Very Interested/Somewhat Interested in learning more about storm water pollution despite no more than 26% of respondents in any of the three surveys saying they are aware of there being a problem with storm water pollution in Memphis.

Having now taken a look at the level of respondent concern, interest, and knowledge about storm water pollution that was demonstrated in this year's survey (as well as in the two previous surveys), we'll next consider a few other survey results suggesting specific strategies that might be considered in future communication efforts designed to raise the level of awareness of the issue of storm water pollution. While looking to the future, it should be stated, however, that the survey results we have been discussing to this point indicate that the City's awareness-building efforts are already paying off, and that any strategies employed based on the recommendations we are about to make only be done in the context of continuing those efforts of the past couple of years.

5)Garbage/Trash/Debris. In all three surveys, by a wide margin, Running out of space for disposing trash has been rated as more of a concern than the three other issues rated: Storm water pollution, Not enough people recycling, and Poor air quality. On average, more than 70% of those surveyed in the three surveys have rated Running out of space for disposing trash to be a Major Concern.

Not only has Running out of space for disposing trash been consistently seen as a Major Concern, but similarly, in all three surveys, Garbage/Trash/Debris was named more often than anything else as an item that gets into storm water to cause storm water pollution.

While Garbage/Trash/Debris might cover lots of different types of items, given the top ranking of Garbage/Trash/Debris as contributing to storm water pollution, combined with, as mentioned above, the degree to which Running out of space for disposing trash is a concern of respondents, any future educational efforts by the City might be well served by highlighting the fact that Garbage and Trash are leading causes of storm water pollution, and that it's important for everyone to properly dispose of Garbage and Trash. (This same educational focus could also apply to Oil/Gas/Other automotive fluids, which again this year ranked very high on the list of items that respondents believe cause storm water pollution.)

6)Individuals Vs. Businesses. In this 2002 survey we saw a major change from the 1999 and 2000 surveys on the survey question that asked respondents if the responsibility for causing storm water pollution rested with Businesses, Individuals, or Both equally. This year, as in each of the first two surveys, a clear majority of those surveyed have said that Both Businesses and Individuals are responsible for causing storm water pollution; however, a look at the results for those respondents who think either Businesses or Individuals are responsible for causing storm water pollution is definitely interesting (see next page).

In this year's survey, unlike the two previous ones, more people thought Individuals, rather than Businesses, responsible for causing storm water pollution. On a percentage basis, the change in the assigning of responsibility in this 2002 survey was sizeable, with the percentage of those surveyed who said Businesses are responsible dropping in half from 1999 and 2000, the percentage who believe Individuals responsible doubling. That Individuals would admit their behavior (rather than that of Businesses) is the cause of storm water pollution makes the 2002 results for this question even more noteworthy.

This shift in respondent opinion to Individuals being the party causing storm water pollution may well be the result of awareness of the City's storm water pollution communication efforts. If indeed the City's awareness-building efforts are resulting in Individuals coming to the realization that their actions (rather than Businesses') are causing storm water pollution, it would seem a good idea to continue communication efforts devoted to ways Individuals cause storm water pollution.

One area in which Individuals' behavior improved this year is that there was a decrease in the percentage of respondents who dispose of leftover Fertilizers/Pesticides/Herbicides, Household cleaning products, or Paint by putting it in the trash.

7)Demographic Segments. In looking at the results for various survey results based on respondents' demographic segments, we again see some trends noted in previous surveys.

Younger respondents, those age 18-34, were considerably less likely than respondents age 35 or older to be aware of the definitions of storm water and storm water pollution read by interviewers, less likely to say there is a problem with storm water pollution in Memphis, less interested in learning more about storm water pollution, and less likely to have seen/read/heard about storm water pollution in the past year.

Younger people are less aware of the issue of storm water pollution and -- perhaps as a result -- are less interested in the subject. Future communication efforts by the City should target younger Memphians in the radio stations, publications, etc. considered.

The results for major survey questions among Black respondents (as compared to Whites) showed that while there was low awareness of the definitions of storm water and storm water pollution (as was noted with Younger people on the previous page), they are above average in saying various environmental issues are a major concern, as well as being interested in learning more about storm water pollution. However, although it appears that Blacks are more interested in the issue of storm water pollution than are Whites, when asked about seeing, reading, or hearing about storm water pollution in the past year, more Whites than Blacks reported awareness of such information.

So, Blacks, unlike Younger people, are motivated to learn more about storm water pollution. The key will be finding the right venues through which to reach the Black community.

Results for Female survey participants paralleled those of Black respondents in that Females were less likely than Males to say they knew the provided definitions of storm water and storm water pollution, but were more interested than Males in learning more about storm water pollution. Females therefore represent a third demographic group (in addition to Young people and Blacks) that would seem open to communications efforts designed to educate the public about storm water pollution.

8) Information Awareness. The final two sections of these conclusions will discuss two survey questions that were added for this 2002 survey.

One of these questions asked respondents if they have seen, read, or heard anything about storm water pollution in the past year. A perhaps surprisingly high 24% of the total sample reported awareness of such information about storm water pollution in the past year.

While advertising/information awareness scores are typically slightly overstated (no one wants to look uninformed when asked if they have seen, read, or heard something), it is hard to not consider this 24% information awareness score impressive; in addition, this information awareness may have been an influence in some of the knowledge of storm water pollution demonstrated by respondents in other survey questions.

The level of awareness of information about storm water pollution as expressed in this survey question, together with the concern/interest/knowledge demonstrated in the results to other survey questions, would seem to suggest that continuation of the City's storm water pollution awareness-building campaign would draw public attention.

9)Potential New Program. The other new survey question this year asked respondents if they would be willing to pay $4 per month for a new program that would pay for projects that would reduce flooding, as well as reduce pollution and trash in our rivers and lakes.

Respondents expressed a fairly high level of interest in this new program, with almost as many survey participants saying they would pay $4 per month as said they wouldn't. However, a third segment of respondents would need to have more information about the program, who would administer it, and how there would accountability and communication of the program's results. This sentiment, though only expressed by 14% of respondents, probably serves as a good suggestion that would apply to the public in general; that is, if this program is started, it will be important to educate the citizenry about its purpose.

DETAILED FINDINGS

How Much Of A Concern Are Various Environmental Issues Facing Memphis?

- 2002 Results -

•In the first survey question, respondents were asked how concerned they were with four environment-related issues facing Memphis.

•Of the four issues, **Running out of space for disposing trash** stood out from the others in terms of being a Major Concern (69%).

•**Not enough people recycling** was seen as a Major Concern of 56% of those surveyed, while about half the survey sample considers **Storm water pollution** (52%) or **Poor air quality** (48%) a Major Concern.

Issues	Major Concern (250)	Minor Concern (250)	Not A Concern (250)
Running out of space for disposing trash	69%	23	8
Not enough people recycling	56%	36	8
Storm water pollution	52%	32	16
Poor air quality	48%	40	12

Note: Percentages read across.

How Did The Percentage Of Respondents Saying Each Environmental Issue Is A Major Concern Change Since 1999?

- This 2002 survey marked the third consecutive survey in which **Running out of space for disposing trash** had a higher "Major Concern" score than the three other issues. Despite being the leading concern of respondents in all three surveys, since 2000 the percentage of respondents rating Running out of space for disposing trash a Major Concern did decrease seven points, to its 1999 level of 69%, from 76% in 2000.
- **Not enough people recycling** continued to rank second as a Major Concern, registering a slight increase in Major Concern score in 2002 (from 53% to 56%), as it did in 2000.
- After decreasing seven points in 2000, mentions of **Storm water pollution** as a Major Concern increased seven points in this 2002 survey (from 45% to 52%).
- Although trailing Not enough people recycling and Storm water pollution by only a few points, slight decreases in each of the past two surveys have resulted in **Poor air quality** having the lowest Major Concern score of the four issues (48% in 2002, down from 52% in 2000).

Major Concern	1999 (400)	2000 (250)	2002 (250)
Running out of space for disposing trash	69%	76%	69%
Poor air quality	54	52	48
Not enough people recycling	52	53	56
Storm water pollution	52	45	52

How Many Respondents Said They Were Aware Of The Definitions Of Storm Water And Storm Water Pollution Read To Them?

- 2002 Results -

- Respondents were next presented with the definitions of storm water and storm water pollution, and asked whether they were aware of those definitions.
- Six out of ten survey participants said they are aware of each of the two definitions: 60% of respondents are **Aware of the definition of storm water**, 59% said they are **Aware of the definition of storm water pollution**.

How Did The Percentage Of Respondents Who Said They Were Aware Of The Definitions Of Storm Water And Storm Water Pollution Change Since 2000?

- The definitions of storm water and storm water pollution reported on the previous page were not included on the survey questionnaire in the original 1999 survey, therefore only results for the 2000 and 2002 surveys are trended in the table below.
- There was little meaningful change in awareness of the two definitions since 2000.
- **Awareness of the definition of storm water** did decline by six points this year (to 60%, from 66% in 2000), but **Awareness of the definition of storm water pollution** improved two points, from 57% in 2000 to 59% this year.

	2000 (250)	2002 (250)
Aware Of:		
Storm water definition	66%	60%
Storm water pollution definition	57	59

What Items Did Respondents Say Get Into Storm Water To Cause Storm Water Pollution?

- 2002 Results -

•After being given definitions of storm water and storm water pollution, respondents were

asked to name items that might get into storm water, thereby causing storm water pollution. The various categories of items mentioned by at least 2% of all survey participants are listed on page 22. In addition, the Appendix lists all the exact items mentioned by respondents, before the items were categorized for the table on page 22.

•Because these causes of storm water pollution were given in respondents' own words and therefore had to be categorized for the table on the page 22, comparing results from the three surveys is not as easy to do as with other survey questions in which respondents are given specific answer choices.

•By about a 2:1 margin, **Garbage/Trash/Debris** was named most often as an item that gets into storm water to cause storm water pollution (47%). Garbage/Trash/Debris has been a clear #1 as a storm water pollution cause in all three surveys.

•**Leaves** and **Oil/Motor oil** were named by about one-fourth of those surveyed as a cause of storm water pollution (24% each). In addition to Oil/Motor oil, a combined 14% of respondents cited related items that cause storm water pollution -- **Gas** (8%) and **Anti-freeze/Other automotive fluids** (6%).

•Three somewhat similar types of items that cause storm water pollution were mentioned relatively often: **Paper/Bags/Cups** (16%), **Cans** (14%), and **Bottles** (12%).

•Chemicals received several mentions as an item that gets into storm water to cause storm water pollution. Thirteen percent (13%) of respondents identified **Chemicals in general, including from yards** as a cause of storm water pollution, while Chemicals were included in the 5% segment of respondents who cited **Waste from businesses, including chemicals**.

(continued)

What Items Did Respondents Say Get Into Storm Water To Cause Storm Water Pollution? (continued)

- 2002 Results -

•Even though, as discussed on the previous page, results for the three years of surveys can't be directly compared, a few of the leading sources of storm water pollution were mentioned quite a bit more often this year than in the 1999 and 2000 surveys. Part of the reason for this increase in mentions is that the average respondent named more items that cause storm water pollution than in the first two surveys, either because of additional prompting by the interviewer or, hopefully, because of knowledge about storm water pollution that has been gained as a result of the City's education efforts.

For example, after only being named by 5% of survey participants as a cause of storm water pollution in 1999 and 2000, the percentage of respondents who said **Leaves** cause storm water pollution jumped dramatically to 24% this year. As specifically regards this item, Leaves, the fact this survey is being conducted at a time of the year in which Leaves are prevalent on the ground could explain the increase in mentions (the first two surveys were conducted in March and September).

Other items that saw a sizeable increase in this 2002 survey as a cause of storm water pollution were **Paper/Bags/Cups** (5% in 1999, 8% in 2000, 16% this year), **Cans** (7% in each of the first two surveys, 14% this year), and **Bottles** (less than 5% in both 1999 and 2000, 12% this year).

•It should be noted that 14% of all respondents said they **Don't know** of any items that get into storm water to cause storm water pollution.

(please see table on the next page)

What Items Did Respondents Say Get Into Storm Water To Cause Storm Water Pollution? (continued)

- 2002 Results -

Items That Cause Storm Water Pollution	Total (250)
Garbage/Trash/Debris (in general)	47%
Leaves	24
Oil/Motor oil	24
Paper/Bags/Cups	16
Cans (coke, beer, etc.)	14
Chemicals (in general, including from yards)	13
Bottles	12
Gas	8
Anti-freeze/Other automotive fluids	6
Limbs/Fallen trees/Branches/Sticks	6
Pesticides	5
Waste from businesses (including chemicals)	5
Dead animals	4
Dirt/Mud	4
Cigarettes	3
Paint	3
Animal waste	2
Fertilizers	2
Food	2
Grass	2
Plastic	2
Sewage	2
Tires	2
Waste (in general)	2
Other	17
Don't know	14

Note:Appendix lists all of the specific items given by respondents.
Note:Multiple responses are allowed, resulting in the total percentage adding to more than 100%.

How Many Respondents Are Aware Of There Being A Problem With Storm Water Pollution In Memphis?

- 2002 Results -

- Seven in ten respondents, 71%, said they are **Not aware of a problem with storm water pollution in Memphis**.
- One-fourth of the survey sample is **Aware of a problem with storm water pollution in Memphis** (26%).

How Did The Percentage Of Respondents Aware Of A Problem With Storm Water Pollution In Memphis Change Since 1999?

•Over the course of the three surveys, there has been a slight increase in the percentage of respondents who are **Aware of a problem with storm water pollution in Memphis**, from 18% in 1999, to 23% in 2000, to 26% in this 2002 survey. While this is certainly not a large increase, efforts to educate the public about storm water pollution in general may have resulted in slightly more people believing Memphis has a storm water pollution problem.

	1999 (400)	2000 (250)	2002 (250)
Aware Of Problem With Storm Water Pollution In Memphis?			
Yes, Aware of problem	18%	23%	26%
Not aware of problem	78	75	71
Don't know	4	2	3

What Group Do Respondents Feel Is Most Responsible
For Causing Storm Water Pollution?
What Group Is Most Responsible For Preventing Storm Water Pollution?

- 2002 Results -

- In consecutive survey questions, respondents were asked who is responsible for causing storm water pollution, and then who is responsible for preventing the problem.
- As far as who is responsible for causing storm water pollution, three-fourths of those interviewed were of the opinion **Businesses and Individuals are Equally responsible** (74%). Of those with a specific opinion, 13% think **Individuals** are responsible, while 10% consider **Businesses** the responsible party.
- Regarding preventing storm water pollution, more than 90% of respondents said **They themselves, Other people, and Businesses are Equally responsible** (92%).

What Change Has Taken Place Since 1999 In The Groups Respondents Feel Are Most Responsible For Causing And Preventing Storm Water Pollution?

- In the 1999 and 2000 surveys, respondents with a definite opinion clearly considered **Businesses** more often a source of storm water pollution than **Individuals**, by at least a 3:1 margin. However, this year, the situation was reversed, with a sizeable eight-point increase in the percentage of respondents saying Individuals are responsible (to 13%), and a nine-point drop in mentions of Business as a cause of storm water pollution (to 10%). If communication efforts by the City have focused on the individuals' role in causing and preventing storm water pollution, the increase we see below in Individuals being cited as responsible for causing storm water pollution may be the result of those communication efforts.
- All three surveys have now seen a minimum of 85% of the survey sample saying **They themselves, Other people, and Businesses are Equally responsible** for preventing storm water pollution (85% in 1999, 86% in 2000, 92% in 2002).

	1999 (400)	2000 (250)	2002 (250)
Responsible For Causing Storm Water Pollution			
Businesses	21%	19%	10%
Individuals	7	5	13
Both equally	69	73	74
Don't know	3	3	3
Responsible For Preventing Storm Water Pollution			
The respondent	2%	1%	1%
Other people	2	2	1
Businesses	8	8	5
All groups equally	85	86	92
Don't know	3	3	1

What Term Do Respondents Feel Best Describes The Opening Where Storm Water Flows?

- 2002 Results -

- A new question was added in the 2000 survey that asked respondents which of three terms they felt best describes the opening where storm water flows. Respondents were also given the opportunity to say they Don't know if any of the terms describe the opening.
- While **Storm drain** was chosen most often as the term that respondents feel best describes the opening where storm water flows (33%), nearly as many, 28%, said they **Don't know** which of the three terms provided describes the opening.
- Of the two other terms read to respondents, 24% chose **Sewer** as the term that describes the opening where storm water flows, 15% thought **Gutter** was the correct term.

How Has The Percentage Of Respondents Who Feel Various Terms Best Describe The Opening Where Storm Water Flows Changed Since 2000?

- This survey question concerning the term for the opening where storm water flows was not added to the survey questionnaire until 2000, therefore only results for the 2000 and 2002 surveys are trended in the table below.
- In both the 2000 and 2002 surveys, **Storm drain** was selected by more respondents as the term that describes where storm water flows (39% in 2000, 33% in 2002).
- However, unlike the 2000 survey, in which **Storm drain** held at least an 18-point advantage over all three of the other terms, this year, due to the six-point decrease in selections of Storm drain (to 33%) and the increase in those who **Don't know** which term best describes the opening (nine-point increase, to 28%), or who said **Sewer** (24%, up from 21% in 2000), Storm drain is not the dominant response in this 2002 survey, as it was in 2000. As a result, to the extent it is important for people to know the correct term for the opening where storm water flows, further education appears to be necessary.

	2000 (250)	2002 (250)
Terms		
Storm drain	39%	33%
Gutter	21	15
Sewer	21	24
Don't know	19	28

Do Respondents Believe Storm Water Goes Through A Cleaning Process Before Reaching The Mississippi River?

- 2002 Results -

- Only 8% of all survey respondents were of the opinion that storm water **Goes through a cleaning process before reaching the Mississippi River**.
- Fifty-six percent (56%) of respondents said storm water does **Not go through a cleaning process before reaching the Mississippi River**.
- Even though, among those with a specific opinion, many more respondents believe storm water does Not go through a cleaning process than said it Goes through a cleaning process (56% vs. 8%), a quite sizeable segment of respondents, 36%, **Don't know if storm water goes through a cleaning process**.

What Change Has Taken Place Since 1999 In The Percentage Of Respondents Who Believe Storm Water Goes Through A Cleaning Process Before Reaching The Mississippi River?

- The percentage of respondents who believe storm water **Goes through a cleaning process before reaching the Mississippi River** decreased seven points since the 2000 survey, to its lowest level in any of the three surveys, 8%.
- There was a similarly-sized 2002 decrease in those with the opinion that storm water does **Not go through a cleaning process** (nine-point decrease, to 56%).
- With both of the above-mentioned response choices decreasing this year, it stands to reason that respondents who **Don't know if storm water goes through a cleaning process** increased noticeably from the 2000 survey. In fact, this Don't know score increased from 20% in 2000 to 36% this year (near the 35% level in the original 1999 survey).
- In each of the three surveys, we basically see the same result: most people who have a definite opinion believe storm water does Not go through a cleaning process, but in all three periods a sizeable portion of respondents Don't know if storm water goes through a cleaning process.

	1999 (400)	2000 (250)	2002 (250)
Does Storm Water Go Through A Cleaning Process?			
Yes, Does go through a cleaning process	11%	15%	8%
Does not go through a cleaning process	54	65	56
Don't know	35	20	36

How Many Respondents Would Stop Doing Something They Learned Could Cause Pollution Of The River?

- 2002 Results -

•As would be expected, nearly all respondents said they **Would stop doing something they learned could cause pollution of the river** (97%).

What Change Has Taken Place Since 1999 In The Percentage Of Respondents Who Would Stop Doing Something They Learned Could Cause Pollution Of The River?

•For the third consecutive survey, 97% of those surveyed **Would stop doing something they learned could cause pollution of the river**.

	1999 (400)	2000 (250)	2002 (250)
Stop Doing Something That Causes Pollution Of River?			
Yes, Would stop	97%	97%	97%
Wouldn't stop	-	1	2
Don't know	3	2	1

How Interested Are Respondents In Learning More About Storm Water Pollution?
- 2002 Results -

- When asked how interested they are in learning more about storm water pollution, a combined 82% of the survey sample said they are **Very Interested** (22%) or **Somewhat Interested** (60%) in learning more about the subject.
- Only 18% of respondents are **Not Interested** in learning more about storm water pollution.

How Did Interest In Learning More About Storm Water Pollution Change Since 1999?

- In all three surveys, at least 82% of respondents replied that they are **Very Interested** or **Somewhat Interested** in learning more about storm water pollution. Less than 20% of respondents in all three surveys are **Not Interested** in learning more about the subject.
- While the 80%+ level of interest (Very Interested/Somewhat Interested) in learning more about storm water pollution is indeed impressive, it might be worth setting a goal of raising the Very Interested score which, on a relative basis, has been less than half of the Somewhat Interested score in all three surveys.
- The consistently high level of Very/Somewhat Interested scores listed below clearly indicates that most people are interested in learning more about storm water pollution.

	1999 (400)	2000 (250)	2002 (250)
Interest In Learning More About Storm Water Pollution			
Very Interested	26%	26%	22%
Somewhat Interested	60	57	60
Not Interested	14	17	18

In The Past Year, How Many Respondents Have Seen, Read, Or Heard Anything About Storm Water Pollution?

- Only Asked In 2002 Survey -

- A new question in this year's survey asked respondents if they have seen, read, or heard anything about storm water pollution in the past year.
- About one in four respondents -- 24% -- reported that they **Have seen, read, or heard about storm water pollution in the past year**.
- While this 24% awareness figure is probably higher than expected, keep in mind that the survey question did not specify that the information seen, read, or heard had to pertain to storm water pollution in Memphis.

Where Did Respondents See Or Hear About Storm Water Pollution?

- Only Asked In 2002 Survey -

- The 60 survey participants who said they had seen, read, or heard about storm water pollution in the past year were then asked whether they saw or heard the information on Television, on Radio, in the Newspaper, in a Brochure, or elsewhere.
- Over three-fourths of those respondents who had Seen, Read, or Heard about storm water pollution, 78%, reported seeing the information on **Television**. Remember that Television awareness could include anything from Public Service Announcements to news stories about storm water pollution.
- Half of those exposed to storm water pollution information saw it in the **Newspaper** (53%), 15% heard it on the **Radio**, and 3% saw it in a **Brochure**.
- A list of the Other sources of storm water pollution can be found on the next page.

Other Ways Respondents Saw Or Heard About Storm Water Pollution

- Only Asked In 2002 Survey -

•Concerning problem in Lakeland
•Discussion with people at work (am a plumber)
•Garden club
•EPA journal

•Internet
•Magazines
•MLG&W bill
•Work in an environmental lab

How Many Respondents Change The Oil In Their Automobile Themselves?

- 2002 Results -

- The focus of survey questions next moved to learning how respondents dispose of various items, the first of which was used oil.
- Before asking how they dispose of used oil, respondents were asked if they usually change their own oil. This year, 18% of those interviewed said they **Change their own oil**, 82% **Don't change their own oil**. (Although not shown in a graph or table, the percentage of respondents who Change their own oil has been between 18% and 20% in all three surveys.)

How Do Respondents Dispose Of Their Used Automobile Oil?
- 2002 Results -

•Those respondents who said they usually change their own oil were then asked in which of five ways they most often dispose of their used Oil.

•Two-thirds of oil changers dispose of their used Oil by **Taking it to a Recycling center** (66%).
•Only one other method of disposing of oil is used by more than 10% of respondents: **Put it in the trash** (18%).
•Although not shown in the graph below, here is how each of the four respondents who Store their used Oil dispose it after storing: 1) Pour on trees cut down or grass want to kill; 2) Use to kill grass; 3) Take to a Recycling center; 4) Did not say.

How Have The Ways In Which Respondents Dispose Of Their Used Oil Changed Since 1999?*

- **Taking to a Recycling center** has been consistently mentioned in each of the three surveys by 62%-68% of respondents who change their oil as the way they usually dispose of their used Oil.
- Similarly, little change has taken place in the number of oil changers who have disposed of their Oil by the other means listed below. Most respondents who don't Take their used Oil to a Recycling center continue to report either **Putting it in the trash** or **Storing it**.

How Dispose Of Used Oil	1999 (75)	2000 (50)	2002 (45)
Take it to a recycling center	68%	62%	66%
Store it	15	10	9
Put it in the trash	11	18	18
Put it in the street	1	4	-
Pour it down the drain	1	-	-
Other	4	6	7

* Only asked of respondents who change their own oil.

Approximately How Many Times Per Year Do Respondents Purchase Oil/Automotive Fluids At A Retail Store?

- 2002 Results -

- In addition to being asked how they dispose of their used oil, those survey participants who change their own oil were also asked approximately how many times per year they purchase oil or other automotive fluids at a store such as AutoZone or Wal-Mart.
- A slight majority of respondents, 56%, buy oil or other automotive fluids **5 times or less**, with 43% purchasing these products **3 to 5 times** per year, 13% **1 to 2 times**.
- On the upper end, 27% of oil changers buy oil or automotive fluids **6 to 10 times**; the most frequent purchasers of oil or other automotive fluids -- represented by 13% of respondents who change their own oil -- do so **More than 10 times** per year.

How Many Respondents Have Either A Yard Or Garden?
- 2002 Results -

•Eighty-five percent (85%) of the survey sample **Has either a yard or garden**, while 15% doesn't; this compares to 79% of respondents who Had a yard or garden in the 2000 survey. In the 1999 survey, this survey question asked respondents if they live in a house (rather than whether or not they have a yard or garden), with 80% of respondents saying they did live in a house.

How Many Respondents Said Fertilizers/Pesticides/Herbicides Are Used On Their Yard/Garden, Either By Themselves Or A Service?

- 2002 Results -

- This year, 41% of respondents who have a yard or garden said **No one applies** Fertilizers/Pesticides/Herbicides on their yard or garden.
- Of the remaining respondents, slightly more said an **Outside service**, rather than **They themselves**, apply Fertilizers/Pesticides/Herbicides (33% vs. 26%).

Since 2000, What Change Has Taken Place In How Many Respondents Said Fertilizers/Pesticides/Herbicides Are Used On Their Yard/Garden, Either By Themselves Or A Service?*

- In a change in question wording from the 1999 survey, respondents in the 2000 and 2002 surveys who have a yard or garden were asked whether Fertilizers, Pesticides, or Herbicides are applied by They themselves, by an Outside service, or by No one. (In 1999, respondents were simply asked if Fertilizers/Pesticides/Herbicides are used on their lawn.) Therefore, only results for the 2000 and 2002 surveys are shown in table below.
- This 2002 survey saw a slight change from 2000 in that slightly more respondents who have a yard or garden reported using an **Outside service** for applying Fertilizers/Pesticides/Herbicides, rather than **They themselves** (33% vs. 26%). In 2000, the results were reversed: 35% of those with yards or gardens said they apply Fertilizers/Pesticides/Herbicides Themselves, 28% used an Outside service.
- In both 2000 and 2002, although not by a wide margin, the highest percentage of respondents said **No one applies** Fertilizers/Pesticides/Herbicides to their yards or gardens (37% in 2000, 41% in 2002).

	2000 (192)	2002 (213)
Who Applies Fertilizers/ Pesticides/Herbicides On Yard/Garden		
The respondent	35%	26%
Outside service	28	33
No one applies	37	41

* Only asked of respondents who have a yard or garden.

What Do Respondents Do With Their Leftover Fertilizers/Pesticides/Herbicides?

- 2002 Results/Based On Who Applies -

- The table on the next page compares how respondents dispose of leftover Fertilizers/ Pesticides/Herbicides, based on whether The respondent or an Outside service applies such products.
- The vast majority of respondents who apply Fertilizers/Pesticides/Herbicides Themselves said they **Store the product and use it later** (90%). No more than 4% of respondents in this segment dispose of their Fertilizers/Pesticides/Herbicides in any other way.
- Just under half of those who use an Outside service for applying Fertilizers/ Pesticides/Herbicides, 46%, **Don't know** what their Outside service does with the leftover product. Among those who do have an idea about what the Outside service does with Fertilizers/Pesticides/Herbicides when some is leftover, most, as was the case with respondents who apply these products Themselves, said the Outside service **Stores the product and uses it later** (44%).

(please see table on the next page)

What Do Respondents Do With Their Leftover Fertilizers/Pesticides/Herbicides?* (continued)

- 2002 Results/Based On Who Applies -

What Do With Leftover Fertilizer/Pesticide/Herbicide	Respondent Applies (56)	Service Applies (71)
Store it and use it later	90%	44%
Put it in the trash	4	-
Take it to a recycling center	4	7
Pour it down the drain	-	3
Other**	2	-
Don't know	-	46

* Only asked of respondents who said fertilizers/pesticides/herbicides are used.

**See Appendix.

What Do Respondents Do With Their Leaves/Grass Clippings?

- 2002 Results -

- Of those respondents who have a yard or garden, 79% reported that they **Bag Leaves/Grass clippings for the city to pick up**.
- The few respondents who don't Bag their Leaves/Grass clippings for the city either **Compost** their Leaves/Grass clippings (10%), or **Leave their Leaves/Grass Clippings in their yard** (7%).

What Change Has Taken Place Since 1999 In What Respondents Do With Leaves/Grass Clippings?

- Even though the results to the 2000 and 2002 survey questions about how Leaves/Grass clippings are dealt with are based on respondents who Have a yard or garden (as opposed to being based on those who Live in a house in the 1999 survey), **Bagging Leaves/Grass clippings for the city to pick up** continues to be what respondents most often do with their Leaves/Grass clippings, by a wide margin. The 79% of people with a yard or garden who Bag their Leaves/Grass clippings for the city to pick up is higher than the approximately 70% of respondents in 1999 and 2000 who Bag their Leaves/Grass clippings for the city to pick up.
- In addition to ranking a very distant second and third, respectively, as what respondents do with their Leaves/Grass clippings, the 10% of respondents in this 2002 survey with a yard or garden who **Compost** and the 7% who **Just leave Leaves/Grass clippings in their yard** were the lowest such percentages in any of the three surveys, albeit not much lower.

	1999 (319)	2000 (192)	2002 (213)
What Do With Leaves/Grass Clippings			
Bag it for the city to pick up	67%	70%	79%
Compost it yourself at your home	15	14	10
Just leave it in your yard	11	13	7
Use for mulch	2	2	1
Put it in the street	2	1	-
Service disposes	1	-	1
Don't have any leaves/grass clippings	-	-	1
Other	2	-	1

* Only asked of respondents who have a yard or garden.

What Do Respondents Do With Their Leftover Household Cleaning Products?

- 2002 Results -

- **Storing and using later** is by far the most popular way in which respondents dispose of their leftover Household cleaning products (74%).
- Leftover household cleaning products are **Put in the trash** by 14% of survey participants, while 5% either **Pour Household cleaning products down the drain** or **Take leftover Household cleaning products to a Recycling center**.

What Change Has Taken Place Since 1999 In What Respondents Do With Leftover Household Cleaning Products?

- In the 1999 survey, one of the choices given respondents for what they do with leftover household cleaning products was simply "Store it." However, due to a feeling that some respondents did not understand the implication of that response choice was supposed to be that "Storing it" meant "Store the product and use it up," this response choice was changed in the 2000 and 2002 surveys to "Store it and use it later."
- While this change in wording might seem minor, we do feel that many respondents chose other response alternatives in the 1999 survey because of uncertainly over what "Store it" meant which, as a result, may have understated the score for "Store it" in 1999.
- Even setting aside the 1999 results and wording difference, there clearly was an increase in this 2002 survey in the number of people who said they **Store their leftover Household cleaning products and use them later**, from 59% in 2000, to 74% in this 2002 survey.
- While the percentage of survey participants Storing their leftover Household cleaning products increased since 2000, **Putting leftover Household cleaning products in the trash** as a means of disposing of these products dropped to 14% this year, from 26% in 2000.

What Do With Leftover Household Cleaning Products	1999 (400)	2000 (250)	2002 (250)
Store it/Use it later*	41%	59%	74%
Put it in the trash	32	26	14
Take it to a recycling center	11	8	5
Pour it down the drain	5	4	5
Put it in the street	1	-	-
Don't have any household cleaning products	10	2	2
Other	-	1	-

* Phrased "Store it" in 1999, "Store it and use it later" in 2000 and 2002.

What Do Respondents Do With Their Old Paint?

- 2002 Results -

- When it comes to how respondents dispose of old Paint, a quarter of those surveyed said they **Don't have any Paint** (25%).
- Just under half of those surveyed, 47%, **Store their old Paint and use it later**.
- Two other means of disposing of old Paint were chosen by several respondents: **Putting old Paint in the trash** (16%) and **Taking old Paint to a Recycling center** (10%).

How Have The Ways In Which Respondents Dispose Of Old Paint Changed Since 1999?

- Just as we discussed on page 50, regarding the change since 1999 in how Household cleaning products are disposed, the more detailed response choice "Store it and use it later" in the 2000 and 2002 surveys resulted in the percentage of respondents saying they **Store their old Paint and use it later** increasing from 32% in 1999 to roughly 45% in each of the last two periods (44% in 2000, 47% in 2002); there was basically no change from 2000 to 2002, however.
- This 2002 survey saw a slight seven-point decrease in disposal of old Paint by **Putting it in the trash** (to 16%, from 23% in 2000). Even with this decrease however, the number of people who put old Paint in the trash is probably higher than it should be.

What Do With Old Paint	1999 (400)	2000 (250)	2002 (250)
Store it/Use it later*	32%	44%	47%
Put it in the trash	20	23	16
Take to a recycling center	9	8	10
Put it in the street	1	1	1
Don't have any paint	37	23	25
Other	1	1	1

* Phrased "Store it" in 1999, "Store it and use it later" in 2000 and 2002.

Summary Of How Respondents Dispose Of Various Items

- 2002 Results -

- The table below summarizes how respondents dispose of Oil, Fertilizers/Pesticides/ Herbicides, Household cleaning products, and Paint.
- Three of the four products are most often disposed by Storing the product and using it later: Fertilizers/Pesticides/Herbicides (90%), Household cleaning products (74%), and Paint (47%).
- While Storing and using later was clearly the preferred disposal method for all three of the three products mentioned above, for old Paint, other methods, such as Putting product in the trash or Taking product to a Recycling center were relatively more often mentioned (16% and 10%, respectively).
- Used Oil is most often Taken to a Recycling center (66%), with Putting used Oil in the trash a distant second place (18%).

	Disposed Items			
How Dispose	Oil	Fertilizers/ Pesticides Herbicides	Household Cleaning Products	Paint
Take to recycling center	66%	4	5	10
Put in trash	18%	4	14	16
Store it/Use it later	9%	90	74	47
Pour down drain	-%	-	5	1
Put in street	-%	-	-	1

Note: Percentages read across.

Note: Included are the disposal alternatives that were tested for all of the various disposed items except Leaves/Grass clippings, because the disposal alternatives for Leaves/Grass clippings did not match those of the other items.

How Many Respondents Clean Up After Their Pet?

- 2002 Results -

- One of the final survey questions asked respondents if they clean up after their pet when they walk their pet.
- A combined 76% of respondents either **Don't have a pet** (62%) or **Have pets they don't walk (such as a cat), or have a pet that does not leave the respondent's property** (14% "No answer" segment).
- Among those respondents who do have a pet they walk, 19% reported that they **Do clean up after their pet**, while 5% do **Not clean up after their pet**.

How Has The Percentage Of Respondents Who Said They Clean Up After Their Pet Changed Since 1999?

- This 2002 survey saw an improvement in the ratio of respondents who **Do clean up after their pet** when they walk their pet, as compared to respondents who do **Not clean up after their pet**.
- Even though more respondents in both 1999 and 2000 **Did clean up after their pet** than did **Not clean up**, there was not a big difference in these two percentages (23% vs. 17% and 23% vs. 14%, respectively). By contrast, the 19% of 2002 respondents who Do clean up after their pet was substantially higher than the 5% who do Not clean up.

	1999 (400)	2000 (250)	2002 (250)
Clean Up After Pet?			
Yes, Clean up after pet	23%	23%	19%
Don't clean up after pet	17	14	5
Don't have a pet	50	54	62
No answer	10	9	14

How Many Respondents Would Be Willing To Pay $4 Per Month For A New Program That Would Pay For Projects To Reduce Neighborhood Flooding And Reduce Pollution And Trash In Our Rivers And Lakes?

- Only Asked In 2002 Survey -

- In a question added for this 2002 survey, respondents were asked if they would be willing to pay $4 per month for a new program that would pay for projects to reduce pollution and trash in rivers and lakes.
- Respondents were somewhat divided in their reaction to paying $4 per month for this potential new program, with 40% of those surveyed saying they **Would pay** for the program, and a slightly higher percentage, 46%, being of the opinion they would **Not pay**.
- The key to swaying public opinion in favor of paying for this program may well lie in the 14% **Don't know** segment of respondents. Many of the people in this segment said they would consider supporting the program if they knew more details about it, including for what the $4 per month would be used and to what entity it would go. In addition, several respondents stressed the importance of seeing results of the program.

Sample Demographic Profile

- 2002 Results -

•The table on the next page profiles the demographic characteristics of the 250 respondents participating in this survey.

Age

•The median age of the survey's respondents is **47 years old**. (Note: The median is the middle value when all values are arrayed from the lowest value to the highest value.)

Race/Ethnicity

•Fifty-eight percent (58%) of those people surveyed were **White**, with the remaining respondents being predominantly **Black** (40%).

Geographic Location

•Several geographic areas of Memphis were represented by more than 10% of respondents: **Midtown** (22%), **Northeast** (22%), **North** (17%), **South** (16%), and **East** (13%). Nearly 10% of those surveyed live in the **Southeast** section of Memphis (9%).

Gender

•The survey sample was comprised of 62% **Females**, 38% **Males**.

(please see table on the next page)

Sample Demographic Profile
(continued)

- 2002 Results -

	Total (250)
Age	
18-24	13%
25-34	17
35-44	16
45-54	19
55-64	16
65-74	10
75 or older	9
Median	47
Race/Ethnicity	
White	58%
Black	40
Asian	1
Other	1
Geographic Location (Component Zip Codes In Parenthesis)	
Midtown (38104/38111)	22%
Northeast (38133/38134/38135)	22
North (38105/38107/38108/38112/38127/38128)	17
South (38106/38109/38114/38116)	16
East (38117/38119/38120/38122)	13
Southeast (38115/38118/38125)	9
Downtown (38103)	1
Gender	
Female	62%
Male	38

ADDITIONAL ANALYSIS

•In addition to analyzing survey results for the 250 respondents in total, we looked at some demographic sub-segments of respondents to determine how their responses to the various survey questions differed from the responses of other respondents.
•The following pages analyze sub-segments of respondents based on:
•Respondents' age (pages 60-63)
•Respondents' gender (pages 64-66)
•Respondents' race (pages 67-70)
•Respondents' geographic location (pages 71-72)

•Although this additional analysis section focuses on survey questions in which noticeable differences existed within the demographic categories being compared, if there are other survey questions whose responses you would like to see compared by the various breakdowns described above, we will supply that information to you.
•In looking at the tables on the following pages, keep in mind that some survey questions
-- such as Question #15a. concerning how respondents dispose of their used oil -- were not asked of the full sample of respondents.
•Note: This Additional Analysis section includes information only from the 2002 survey.

(continued)

Additional Analysis -- Respondents' Age

- The tables beginning on page 62 note survey questions on which there was a difference between the responses of respondents 18-34 years old, 35-54 years old, and 55 years old or older.
- Survey participants between the ages of 18 and 34 differed from those age 35-54 and 55 or older in their responses to several survey questions:
  - Quite a bit less likely to be **Aware of the definitions of storm water and storm water pollution** (44% and 47%, respectively).
- Noticeably less likely to say they are **Aware of a problem with storm water pollution in Memphis** (13%).
- Less **Interested (based on Very Interested/Somewhat Interested score) in learning more about storm water pollution** (75%).
- Less likely to have **Seen/Read/Heard about storm water pollution in the past year** (12%).
- More likely to **Change their own Oil** (26%).
- When it comes to applying Fertilizers/Pesticides/Herbicides, more likely to say **No one applies** these products on their yard or garden (52%), less likely to say an **Outside service** applies the products (24%).
- Only 1% report **Taking old Paint to a Recycling center**.

(continued)

Additional Analysis -- Respondents' Age
(continued)

•The middle age segment of respondents, those age 35-54, stood out from the other respondents on two survey question:
•They are more likely to **Put used Oil in the trash** (33%).
•More likely to **Store and use later leftover Household cleaning products** (83%).
•Survey participants age 55 or older contrasted with the two other age groups in the following ways:
•More likely to be of the opinion that **Poor air quality** is a Major concern facing the city of Memphis (56%).
•Twice as likely to consider **Businesses responsible for causing storm water pollution** (16%).
•Considerably less likely to **Store old Paint and use it later** (31%), but more likely to **Put old Paint in the trash** (23%).
•Less likely to say they **Would pay $4 per month for a new program to reduce flooding and pollution in rivers and lakes** (30%).

(please see tables on the next two pages)

Additional Analysis -- Respondents' Age
(continued)

	Age			
	Total	18-34	35-54	55+
	(250)	(75)	(89)	(84)
Issues That Are A Major Concern (Question #2)				
Poor air quality 48%	48%	44%	56%	
Aware Of Definition Of Storm Water? (Question #3)				
Yes, Aware of definition	60%	44%	66%	65%
Aware Of Definition Of Storm Water Pollution? (Question #4)				
Yes, Aware of definition	59%	47%	65%	63%
Aware Of Problem With Storm Water Pollution In Memphis? (Question #6)				
Yes, Aware of problem	26%	13%	33%	32%
Responsibility For Causing Storm Water Pollution? (Question #7)				
Businesses 10%	7%	8%	16%	
Interest In Learning More About Storm Water Pollution (Question #12)				
Very/Somewhat Interested	82%	75%	86%	84%
Saw/Read/Heard About Storm Water Pollution In Past Year (Question #13a.)				
Yes, Saw/Read/Heard	24%	12%	27%	31%

(continued)

Additional Analysis -- Respondents' Age
(continued)

	Age			
	Total	18-34	35-54	55+
	(250)	(75)	(89)	(84)
Change Own Oil? (Question #14)				
Yes, Change own oil	18%	26%	17%	13%
How Dispose Of Oil? (Question #15a.)				
Put it in the trash	18%	11%	33%	9%
Who Applies Fertilizers/ Pesticides/Herbicides On Yard/Garden? (Question #18)				
An outside service	33%	24%	37%	37%
No one applies 41	52	35	37	
What Do With Leftover Household Cleaning Products? (Question #21)				
Store it/Use it later	74%	72%	83%	68%
What Do With Old Paint? (Question #22)				
Store it/Use it later	47%	56%	57%	31%
Put it in the trash	16	13	11	23
Take to a recycling center	10	1	11	17
Pay $4 Per Month For New Program (Question #24)				
Yes, Would pay	40%	43%	49%	30%

Additional Analysis -- Respondents' Gender

•Differences on survey questions between Male and Female survey participants are shown in the tables on the next two pages.
•Somewhat more Males than Females gave the following survey responses:
•**Aware of the definition of storm water** (69% of Males, vs. 54% of Females) and **Aware of the definition of storm water pollution** (69% vs. 53%).
  •More likely to be **Aware of a problem with storm water pollution in Memphis** (33% vs. 22%).
•Chose **Storm drain** as the term for the opening where storm water flows (41% vs. 28%).
•Reported **Changing their own Oil** (25% vs. 14%) and **Taking used Oil to a Recycling center** (79% vs. 52%).
•**Compost Leaves/Grass clippings** (17% vs. 6%).
•As compared to Males, Females:
•Were twice as likely to say they **Don't know** which of three terms best describes the opening where storm water flows (34% Females vs. 17% Males).
•More likely to say they are **Very/Somewhat Interested in learning more about storm water pollution** (86% vs. 77%).
•More likely to **Put used Oil in the trash** (38% vs. 0%).
•More often **Bag their Leaves/Grass clippings for the city to pick up** (84% vs. 69%).

(please see tables on the next two pages)

Additional Analysis -- Respondents' Gender
(continued)

	Total	Gender	
		Male	Female
	(250)	(96)	(154)
Aware Of Definition Of Storm Water? (Question #3)			
Yes, Aware of definition	60%	69%	54%
Aware Of Definition Of Storm Water Pollution? (Question #4)			
Yes, Aware of definition	59%	69%	53%
Aware Of Problem With Storm Water Pollution In Memphis? (Question #6)			
Yes, Aware of problem	26%	33%	22%
Term That Best Describes Opening Where Storm Water Flows (Question #9)			
Storm drain	33%	41%	28%
Don't know	28	17	34
Interest In Learning More About Storm Water Pollution (Question #12)			
Very/Somewhat Interested	82%	77%	86%
Change Own Oil? (Question #14)			
Yes, Change own oil	18%	25%	14%
How Dispose Of Oil? (Question #15a.)			
Take to a recycling center	66%	79%	52%
Put it in the trash	18	-	38

(continued)

Additional Analysis -- Respondents' Gender
(continued)

	Total	Gender	
		Male	Female
	(250)	(96)	(154)
What Do With Leaves/Grass Clippings? (Question #20)			
Bag for the city to pick up	79%	69%	84%
Compost	10	17	6

Additional Analysis -- Respondents' Race

•Tables on pages 69 and 70 report survey questions on which there was a difference between the responses of White respondents and Black respondents.

•On the following survey questions, White respondents' opinions differed noticeably from those of Black respondents:

•More likely to be **Aware of the definition of storm water** (71% of Whites, vs. 46% of Blacks) and **Aware of the definition of storm water pollution** (71% vs. 44%).

•Consider **Individuals** and **Businesses** responsible for causing storm water pollution (16% vs. 10% and 12% vs. 7%, respectively).

•Believe **Storm drain** (40% vs. 23%) or **Gutter** (19% vs. 9%) to be the terms that best describe the opening where storm water flows.

•Said they have **Seen/Read/Heard about storm water pollution in the past year** (29% vs. 18%).

•**Take used Oil to a Recycling center** (86% vs. 48%).

•**Compost Leaves/Grass clippings** (15% vs. 5%).

•**Take old Paint to a Recycling center** (17% vs. 1%).

•On the other hand, here are survey results in which Blacks' responses stood in contrast to those of Whites:

•Of four issues facing the city of Memphis that were tested in this survey, Black respondents were above average in considering three of the four a Major concern: **Running out of space for disposing trash** (Blacks 76%, Whites 65%), **Storm water pollution** (69% vs. 39%), and **Poor air quality** (61% vs. 39%).

•Said **Sewer** is the term that best describes the opening where storm water flows (37% vs. 16%).

(continued)

Additional Analysis -- Respondents' Race
(consider)

- On the other hand, here are survey results in which Blacks' responses stood in contrast to those of Whites: (continued)
- More likely to be **Very/Somewhat Interested in learning more about storm water pollution** (89% vs. 78%).
- **Put used Oil in the trash** (30% vs. 5%).
- More often **Bag Leaves/Grass clippings for the city to pick up** (86% vs. 72%).

(please see tables on the next two pages)

Additional Analysis -- Respondents' Race
(continued)

		Race	
	Total	White	Black
	(250)	(145)	(101)
Issues That Are A Major Concern (Question #2)			
Running out of space for disposing trash	69%	65%	76%
Storm water pollution	52	39	69
Poor air quality	48	39	61
Aware Of Definition Of Storm Water? (Question #3)			
Yes, Aware of definition	60%	71%	46%
Aware Of Definition Of Storm Water Pollution? (Question #4)			
Yes, Aware of definition	59%	71%	44%
Responsibility For Causing Storm Water Pollution? (Question #7)			
Individuals	13%	16%	10%
Businesses	10	12	7
Term That Best Describes Opening Where Storm Water Flows (Question #9)			
Storm drain	33%	40%	23%
Sewer	24	16	37
Gutter	15	19	9
Interest In Learning More About Storm Water Pollution (Question #12)			
Very/Somewhat Interested	82%	78%	89%

(continued)

Additional Analysis -- Respondents' Race
(continued)

	Total	Race	
		White	Black
	(250)	(145)	(101)
Saw/Read/Heard About Storm Water Pollution In Past Year (Question #13a.)			
Yes, Saw/Read/Heard	24%	29%	18%
How Dispose Of Oil? (Question #15a.)			
Take to a recycling center	66%	86%	48%
Put it in the trash	18	5	30
What Do With Leaves/Grass Clippings? (Question #20)			
Bag for the city to pick up	79%	72%	86%
Compost	10	15	5
What Do With Old Paint? (Question #22)			
Take to a recycling center	10%	17%	1%

Additional Analysis -- Respondents' Geographic Location

•The table on the next page notes survey questions on which responses differed based on whether a respondent lived in Midtown Memphis, Northeast Memphis, North Memphis, South Memphis, East Memphis, or Southeast Memphis. The zip codes comprising each geographic area can be found in the footnote that accompanies the table on the next page.

Major Issues (Question #2)

•In looking at the two issues shown on the next page in which differences were noted based on respondents' area of Memphis, we see that consideration of **Storm water pollution** as a Major concern was higher in South Memphis than in any of the five other areas of Memphis (67%). In addition, South Memphis survey participants were the second-most likely to consider **Poor air quality** a Major concern (56%). By contrast, East and Northeast respondents attached little concern to these two issues (no more than 40%).

Definitions (Questions #3 and #4)

•**Awareness of the definitions of both storm water and storm water pollution** was highest in Midtown (69% and 73%, respectively), and relatively high in East and Northeast Memphis (62%-70%). By contrast, those surveyed in the South and Southeast areas of the city were below average in claiming awareness of both definitions (50% and below).

Use Of Fertilizers/Pesticides/Herbicides (Question #18)

•Southeast Memphis respondents, by nearly a 3:1 margin, more often use **An outside service** to apply Fertilizers/Pesticides/Herbicides on their yard or garden, rather than applying these products **Themselves** (56% vs. 19%).

•In one of the six areas of Memphis -- North Memphis -- over half of respondents said **No one applies Fertilizers/Pesticides/Herbicides** on their yard or garden (53%).

(please see table on the next page)

Additional Analysis -- Respondents' Geographic Location (continued)

		Area Of Memphis*					
	Total (250)	Mid-town (55)	North-east (55)	North (43)	South (39)	East (33)	South-east (22)
Issues That Are A Major Concern (Question #2)							
Storm water pollution	52%	53%	38%	62%	67%	40%	46%
Poor air quality	48	54	38	51	56	34	59
Aware Of Definition Of Storm Water? (Question #3)							
Yes, Aware of definition	60%	69%	67%	58%	40%	64%	50%
Aware Of Definition Of Storm Water Pollution? (Question #4)							
Yes, Aware of definition	59%	73%	62%	53%	46%	70%	36%
Who Applies Fertilizers/ Pesticides/Herbicides On Yard/Garden? (Question #18)							
The Respondent	26%	26%	32%	19%	27%	32%	19%
An outside service	33	28	36	28	27	39	56
No one applies	41	46	32	53	46	29	25

*Zip codes: 38104/38111 (Midtown)
38133/38134/38135 (Northeast)
38105/38107/38108/38112/38127/38128 (North)
38106/38109/38114/38116 (South)

38117/38119/38120/38122 (East)
38115/38118/38125 (Southeast)

Appendix

Question #5 -- Respondents' Definitions Of Storm Water Pollution
(List of All Responses -- Page 1 of 6)

•Fast-food containers.
•Trash. Old mattresses. Bottles.
•Containers. Paper products.
•Toxins. Paper products.
•Chemicals. Fertilizers from lawns.

•Chemicals. Dead animals.
•Paint. Chemicals.
•Chemicals. Garbage.
•Basketballs. Toys.
•Needles. Drugs.

•Chemicals. Trash.
•Trash. Chemicals.
•Trash. Garbage. Cans.
•Leaves. Trash. Cigarette butts.
•Debris. Bags. Garbage. Fast-food packaging.

•Trash. Debris. Oil.
•Garbage.
•Swimming pool water. Gasoline. Debris.
•Industrial waste.
•Dumping items.

•Insects. Things that rot and make fungus. Leaves. Dead animals. Rats. Reptiles.
•Anti-freeze. Oil. Stuff people dump in the drain. Fertilizer from farm land.
•Oil. Anti-freeze. Chemicals.
•Pesticides from lawns and farms. Oil.
•Fertilizers. Pesticides. Oil. Gas. Trash. Grease. Soap.

•Trash. Leaves. Sticks.
•Leaves. Garbage. Bottles. Cans.
•Oil. Debris. Leaves.
•Diapers.
•Cans. Grass. Paper.

•Litter. Paper products. Chemical plant pollution.
•Oil. Transmission fluid. Leaves. Trash. Newspapers. Candy wrappers. Pampers.
•Oil. Anti-freeze. Pesticides.
•Oil. Gas. Anti-freeze.
•Limbs. Cans. Bottles.

•Cigarette butts. Leaves. Trash.

•Trash.
•Garbage. Trash.
•Chemicals from construction.

Question #5 -- Respondents' Definitions Of Storm Water Pollution
(List of All Responses -- Page 2 of 6)

•Leaves.
•What mechanics use in a gas station or car repair shop. Leaf clippings and dropped leaves.
•Leaves. Runoff from fertilizer. Pool water.
•Leaves. Cigarette butts. Waste from animals.
•Runoff from chemicals from businesses.

•Dirt. Trash.
•Trash. Sticks. Leaves.
•Trash. Companies dumping chemicals.
•Debris. Trash. People who throw things into the drain that are not sanitary.
•Debris. When they don't sweep the streets. Trash.

•Chemicals. Trash. Waste material. Debris.
•Oil. Trash.
•Garbage.
•Litter.
•Leaves. Grass clippings.

•Trash. Dirt. Chemicals. Oil.
•Oil. Gas. Debris.
•Trash. Chemicals from plants.
•Drainings from cars. Standing water. Trash. Paper. Sticks. Dirt. Cans.
•Water. Oil. Trash.

•Branches. Leaves.
•Trash. Leaves. Oil.
•Oil. Gas. Urine.
•Tree limbs. Leaves. Gasoline.
•Oil.

•Leaves. Yard trash. Paper.
•Garbage. Plastics. Leaves.
•Leaves. Limbs. Tires. Litter. Chemicals from yards.
•Chemicals. Construction debris.
•Leaves. Paper. Garbage.

•Dead animals. Germs.
•Urine. Food. Trash. Paper.
•Paper. Leaves. Grass.
•Leaves. Cups.
•Cigarette butts. Leaves. Cans.

•Chemicals. Pesticides.

•Bottles. Cans. Paper.
•Chemicals. Garbage. Food.

Question #5 -- Respondents' Definitions Of Storm Water Pollution
(List of All Responses -- Page 3 of 6)

•Chemicals. Oil. Trash.
•Leaves. Old tires.
•Leaves.
•Diaper. Trash.
•Oil. Fertilizer. Trash. Leaves.

•Oil. Chemicals.
•Leaves. Brush. Paper.
•Oil. Gas. Chemicals from yards.
•Oil. Gasoline.
•Leaves. Limbs. Plastic bottles. Aluminum cans.

•Old tires. Trash.
•Cups. Bags.
•Chemicals. Oil. Paints.
•Animals. Leaves.
•Leaves. Bottles.

•Leaves. Cans. Limbs.
•Paper. Cans. Bottles.
•Leaves.
•Chemicals from lawns. Trash. Paper. Cans.
•Leaves. Waste. Paper. Cans. Bottles.

•Oil. Debris. Rats.
•Oil. Cans. Gas. Paint products.
•Leaves. Bottles. Trash.
•Dead animals. Food. Garbage.
•Flush out radiators. Oil. Gas.

•Oil. Gasoline. Dirt. Trash.
•Chemicals.
•Milk carton. Garbage.
•Plastic.
•Gas from boats downtown.

•Leaves. Trees. Toys. Trash.
•Grease. Oil.
•Junk. Bottles. Cans. Paper.
•Food. Trash. Papers.
•Sewer.

•Papers. Cans. Bottles.

•Non-perishable items. Gas. Cans.
•Flies. Insects. Worms.
•Oil. Leaves. Sticks. Cans. Garbage.

Question #5 -- Respondents' Definitions Of Storm Water Pollution
(List of All Responses -- Page 4 of 6)

•Dead animals. Oil. Gas.
•Chemicals.
•Disposable cups. Cans. Bottles. McDonald's papers.
•Pesticides. Fertilizer. Grass from yards.
•Trash. Chemicals. Human waste. Pesticides. Animal waste.

•Beer bottles. Trash. Fast-food papers.
•Factories. Chemicals.
•Papers. Stuff from cars.
•Oil. Pesticides. Chemicals.
•Oil. Trash. Debris. Bottles. Cans.

•Leaves. Oil. Sand. Gas. Chemicals.
•Yard chemicals. Leaves.
•Pesticides. Insecticides. Roofing. Sand. Silt.
•Tires. Oil. Pesticides. Carbon deposit. Exhaust from cars and planes.
•Branches. Debris. Tires.

•Dirt. Stuff from yards washing away. Oil.
•Trash. Plastic coke bottles. Leaves. Paper.
•Cans. Paper. Bottles.
•Paper. Bottles.
•Trash. Paper. Cans. Glass.

•Leaves. Trash.
•Leaves. Trash.
•Cars. Trash. Animal droppings.
•Garbage.
•Bottles. Fast-food. Food wrappers.

•Chemicals from business. Sewage.
•Bottles. Cans.
•Phosphate. Oil.
•Automobile oil by-products.
•Bottles. Paper.

•Bottles. Metal.
•Leaves.
•Oil.
•Chemicals. Bottles.
•Oil. Anti-freeze. Chemicals.

•Garbage. Oil. Gas. Dirt.

•Mud.
•Oil. Chemicals.
•Bottles. Trash.

Question #5 -- Respondents' Definitions Of Storm Water Pollution
(List of All Responses -- Page 5 of 6)

•Cigarette butts. Garbage.
•Garbage. Trash.
•Trash. Oil. Gas.
•Sewage. Dead birds and animals.
•Oil. Gas. Chemicals.

•Beer cans. Paper.
•Bottles. Cans. Trash.
•Trash. Oil.
•Aluminum cans. Plastic bottles.
•Cans. Plastic items.

•Mud. Trash.
•Debris from business. Garbage.
•Dirt. Trash.
•Leaves. Trash.
•Trash. Dog's mess.

•Paper. Cans.
•Oil. Gas. Paint.
•Cans. Trash. Cigarette butts. Cigars.
•Oil.
•Cans. Paper products. Trash. Leaves. Sticks.

•Trash. Oil.
•Chemicals sprayed on grass. Bottles. Cans. Debris.
•Air pollution. Leaves. Debris. Trash.
•Pesticides. Oil. Trash.
•Trash. Leaves. Bottles. Cans.

•Trash. Bottles. Leaves. Paper bags.
•Leaves. Debris. Oil. Paint.
•Runoff from factories. Debris. Grass. Leaves.
•Chemicals from industries. Oil. Anti-freeze. Debris.
•Trash. Leaves. Debris.

•Leaves. Trash. Litter. Cans.
•Oil. Debris. Soda pop cans.
•Plastic bottles. Cans. Debris.
•Leaves.
•Oil.

•Leaves. Debris.

•Trash. Leaves.
•Trash.
•Trash. Waste. Leaves.

Question #5 -- Respondents' Definitions Of Storm Water Pollution
(List of All Responses -- Page 6 of 6)

•Leaves. Trash.
•Leaves. Twigs. Plastic things.
•Solvents. Motor oil. Crank shaft oil. Paint.
•Oil. Gas. Lawn chemicals. Debris.
•Leaves. Trash.

•Garbage. Trash. Dog feces.
•Old papers. Old clothes. Garbage. Oil.
•Anything in the street.
•Pesticides.
•Pesticides. Insecticides.

•Oil.
•Oil. Trash.
•Trash. Cans. Paper.
•Leaves.
•Oil.

•Sewage. Trash.
•Chemicals. Garbage. Sewage.
•Feces from animals.
•Diesel fuel. Paint. Hazardous material.
•Trash. Debris. Tree limbs.
•Chemicals. Oil.

Questions #15a., #19a., #20, #22 -- Other Ways In Which Items Are Disposed
(Each Item Mentioned By One Respondent -- Page 1 of 1)

Question #15a. -- Disposal Of Used Oil

•Use it for edge control (to slow growth, not kill grass).
•Pour along fence to kill weeds.
•Put on grass to kill unwanted grass.

Question #19a. -- What Respondent Does With Leftover Fertilizers/Pesticides/Herbicides

•Take to local dump.

Question #20 -- What Do With Leaves/Grass Clippings

•Take to local dump.

Question #22 -- What Do With Leftover Old Paint

•Give to someone to use.
•Pour it down the drain.

Respondent Telephone #

Interviewer_____ Date

Good evening, I'm ____ with Research Dynamics marketing research. We are conducting a brief public opinion survey. We are not selling anything.

1.Are you at least 18 years old?

Yes__1 ->CONTINUE

No__2 ->ASK TO SPEAK TO ANY OTHER HOUSEHOLD MEMBER WHO IS AT LEAST 18 YEARS OLD AND REPEAT INTRODUCTION ABOVE. IF UNAVAILABLE, EITHER MAKE NOTE TO CALL BACK OR TERMINATE.

In this survey, we would like to ask your opinion about various issues facing the city of Memphis.

2.First, I am going to read a list of a few issues facing the city of Memphis. Please tell me if you consider each issue to be a Major concern, Minor concern, or Not a concern. (READ LIST OF CONCERNS. CIRCLE ONE RESPONSE FOR EACH CONCERN.)

	Major Concern	Minor Concern	Not A Concern
Poor air quality	1	2	3
Storm water pollution	1	2	3
Not enough people recycling	1	2	3
Running out of space for disposing trash	1	2	3

3.Storm water is the runoff from rain and melted snow that flows into the city's storm drain system. Were you aware of this? (CIRCLE ONE ONLY.)

Yes_____1

No_____2

Don't know (DON'T READ)____3

4.Storm water pollution occurs when items get into the storm water, whether accidentally or on purpose. Were you aware of this? (CIRCLE ONE ONLY.)

Yes_____1

No_____2

Don't know (DON'T READ)____3

5.As far as you know, what items get into storm water that cause storm water pollution? (WRITE RESPONSE IN BLANK.)

6.Are you aware of there being a problem with storm water pollution in Memphis? (CIRCLE ONE ONLY.)

Yes.....1
No.....2

Don't know (DON'T READ).....3

7.Based on the definition of storm water pollution I read earlier, who do you feel is responsible for causing storm water pollution? Would it be...(READ LIST. CIRCLE ONE ONLY.)

Businesses.....1
Individuals.....2
Both equally.....3

Don't know (DON'T READ).....4

8.And whose responsibility do you feel it is to prevent storm water pollution? Would it be...(READ LIST. CIRCLE ONE ONLY.)

You yourself.....1
Other people.....2
Businesses.....3
All of these equally.....4

Don't know (DON'T READ).....5

9.Which of the following terms do you feel best describes the opening where storm water flows? (READ LIST. CIRCLE ONE ONLY.)

Gutter.....1
Storm drain.....2
Sewer.....3
Don't know.....4

10.As far as you know, does storm water go through a cleaning process before it reaches the Mississippi River, or does it not go through a cleaning process? (CIRCLE ONE ONLY.)

Cleaned.....1
Not cleaned.....2

Don't know (DON'T READ).....3

11.If you learned that something you were doing could cause pollution of the river, would you stop doing it? (CIRCLE ONE ONLY.)

Yes.....1
No.....2

Don't know (DON'T READ).....3

12.How interested are you in learning more about the issue of storm water pollution? Would you say...(READ LIST. CIRCLE ONE ONLY.)

Very interested.....1
Somewhat interested.....2
Not interested.....3

Don't know (DON'T READ).....4

13a.In the past year, have you seen, read, or heard anything about storm water pollution? (CIRCLE ONE ONLY.)

Yes.....1 > CONTINUE
No.....2 > GO TO QUESTION #14

13b.ONLY ASK IF "YES" CIRCLED IN QUESTION #13a.: Did you see or hear about storm water pollution...(READ LIST. CIRCLE ALL THAT APPLY.)

On television.....1
On radio.....2
In the newspaper.....3
In a brochure.....4

Other (IF VOLUNTEERED)

14.Do you usually change the oil in your automobile yourself? (CIRCLE ONE ONLY.)

Yes.....1 > CONTINUE
No.....2 > GO TO QUESTION #17
Don't know (DON'T READ).....3 > GO TO QUESTION #17

15a.ONLY ASK IF "YES" CIRCLED IN QUESTION #14: How do you usually dispose of your used oil? (READ LIST. CIRCLE ONE ONLY.)

Put it in the street.....1
Store it.....2
Take it to a recycling center.....3
Put it in the trash.....4
Pour it down the drain.....5

Other

15b.ONLY ASK IF "STORE IT" CIRCLED IN QUESTION #15a.: And after you store your used oil, how do you usually dispose of it? (READ LIST. CIRCLE ONE ONLY.)

Put it in the street.....1
Take it to a recycling center.....2
Put it in the trash.....3
Pour it down the drain.....4

Other

16.ONLY ASK IF "YES" CIRCLED IN QUESTION #14: Approximately how many times per year do you buy oil or other automotive fluids at a store like AutoZone or Wal-Mart? (WRITE NUMBER IN BLANK.)

17.Do you have either a yard or garden? (CIRCLE ONE ONLY.)

Yes.....1 -> CONTINUE
No.....2 -> GO TO QUESTION #21
Don't know (DON'T READ).....3 -> GO TO QUESTION #21

18.ONLY ASK IF "YES" CIRCLED IN QUESTION #17: Which of the following best describes the use of fertilizers, pesticides, or herbicides on your yard or garden? (CIRCLE ONE ONLY.)

You yourself apply these.....1 -> GO TO QUESTION #19a.
An outside service applies these....2 -> GO TO QUESTION #19b.
No one applies these.....3 -> GO TO QUESTION #20

19a.ONLY ASK IF "YOU YOURSELF" CIRCLED IN QUESTION #18: How do you usually dispose of fertilizers, pesticides, or herbicides when you have some leftover? (READ LIST. CIRCLE ONE ONLY.)

Put it in the street.....1
Store it and use it later.....2
Take it to a recycling center.....3
Put it in the trash.....4
Pour it down the drain.....5

Other

19b.ONLY ASK IF "AN OUTSIDE SERVICE" CIRCLED IN QUESTION #18: Which of the following do you believe your service does with fertilizers, pesticides, or herbicides when it has some leftover? (READ LIST. CIRCLE ONE ONLY.)

Put it in the street.....1
Store it and use it later.....2
Take it to a recycling center.....3
Put it in the trash.....4
Pour it down the drain.....5

Other

20.ONLY ASK IF "YES" CIRCLED IN QUESTION #17: What do you usually do with your leaves and grass clippings? (READ LIST. CIRCLE ONE ONLY.)

Put it in the street.....1
Bag it for the city to pick up.....2
Compost it yourself at your home.....3
Just leave it in your yard.....4

Don't have any leaves/
grass clippings (DON'T READ).....5

Other

21.RESUME ASKING ALL RESPONDENTS: What do you usually do with household cleaning products when you have some leftover? (READ LIST. CIRCLE ONE ONLY.)

Put it in the street.....1
Store it and use it later.....2
Take it to a recycling center.....3
Put it in the trash.....4

Pour it down the drain.....5

Don't have any household
cleaning products (DON'T READ).....6

Other

22.What do you usually do with your old paint when you have some leftover? (READ LIST. CIRCLE ONE ONLY.)

Put it in the street.....1
Store it and use it later.....2
Take it to a recycling center.....3
Put it in the trash.....4

Don't have any paint (DON'T READ).....5

Other

23.If you have a pet, do you usually clean up after your pet when you are walking your pet? (CIRCLE ONE ONLY.)

Yes.....1
No.....2

Don't have a pet (DON'T READ)....3

24.Would you be willing to pay $4 per month for a new program that would pay for projects to reduce neighborhood flooding and reduce pollution and trash in our rivers and lakes? (CIRCLE ONE ONLY.)

Yes.....1
No.....2

25.One final question: May I ask your age, please? (WRITE AGE IN BLANK.)

28.INTERVIEWER NOTE RACE IF OBVIOUS. IF RACE IS NOT OBVIOUS: Please stop me when I read your correct ethnic background:

White.....1
Black.....2
Hispanic.....3
Asian.....4
Other.....5

This completes our interview. Thank you for your cooperation.

27.INTERVIEWER DO NOT ASK. PLEASE WRITE IN ZIP CODE FROM DATABASE OF PHONE NUMBERS:

29.INTERVIEWER DO NOT ASK. PLEASE CIRCLE:

Male.....1
Female.....2

42,100,126,142